



A service to measure and improve biodiversity using satellite data for monitoring, evaluation and optimization of CAP greening initiatives



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Image source: animalspot.net

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Image source: NPA

In the last months of the project, BirdWatch entered its testing phase and we started to share BirdWatch's output with potential future users across our four project test regions.

This issue focusses on activities in **Flanders**, starting with introducing you to our results for this region.

Project partner VITO invited test users to several on- and offline workshops, in which the BirdWatch platform was presented and subsequently discussed.

We briefly summarise on who took part and some key takeaways.

While the technical development and improvement of the platform is progressing, our project partner NPA took on the important task of showcasing the BirdWatch project, especially among policymakers and the farming community.

For example, NPA presented BirdWatch at the **IACS Community Exchange** annual conference last September!

FARMLAND BIRD HABITATS IN... FLANDERS



For Flanders, we developed habitat models for eight different farmland bird species. Previous newsletters* gave insight into the approach Bird-Watch is taking.

The species occurrence points from Natuurpunt**, the largest nature conservation organisation in Flanders, provided essential field data for the models.

Fig. 1 shows occurrence points of a subset of our farmland bird species for which we developed habitat models.

Climate and environmental data, based predominantly on satellite images of the EU's Copernicus Programme, served as input for the characterisation of farmland habitats.

We extracted the climatic and environmental

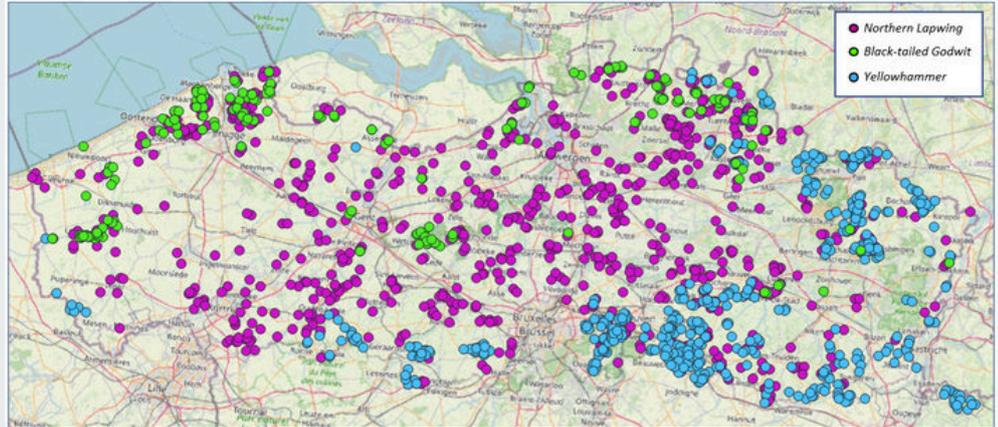


Figure 1: Distribution of occurrence points for three of the eight bird species for which habitat models were developed; Background map by OpenStreetMap

conditions associated with the birds' occurrence points. Parcel data provided us with the boundaries of agricultural land as well as with the types of crops grown on them.

This allowed us to assess the climate conditions and the types of land cover of the areas where the birds were recorded and thus the range of conditions under which they breed.

The figure on the next page shows maps of habitat suitability for three bird species in Flanders. Values range from 0 to 1, with 1 indicating high suitability for the bird.

Once we have implemented the last tweaks, information just like this will be made available via the BirdWatch platform.

*[Download our newsletters here](#)

** [Natuurpunt](#)

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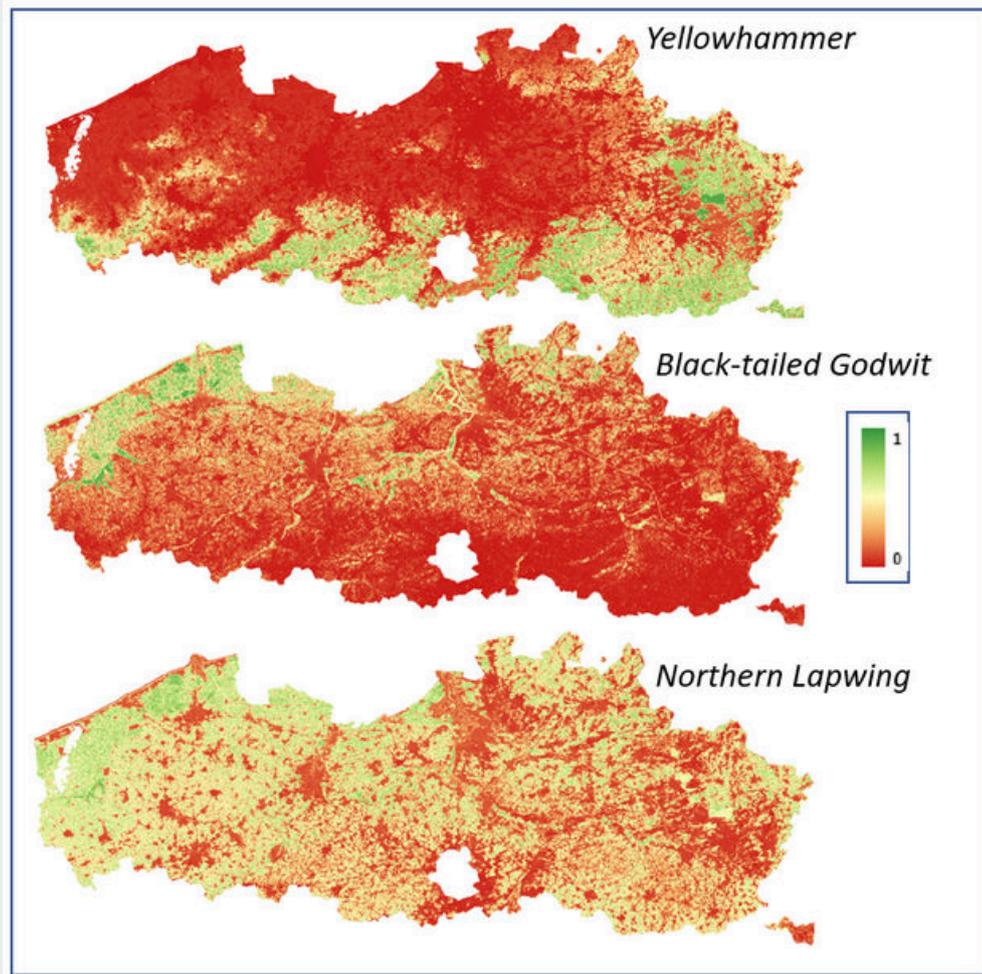


Figure 2: Habitat suitability maps for three of the eight bird species for which habitat models were developed

The habitat suitability for each of the species, depicted in Fig. 2, shows generally low values, albeit with regional differences.

For example, in the West of Flanders, the Black-tailed godwit encounters very unfavourable habitat conditions, while the Yellowhammer might find good spots to breed.

Information like this provides a species-specific view on the farmland habitat conditions across a region, allowing to quickly **identify hot spots** and **areas which are problematic** for birds.

FARMLAND BIRD HABITATS IN... FLANDERS



To showcase the potential of a data-driven, mathematical approach to support decision-making, two exemplary policy scenarios served as input to calculate agri-environmental measures aimed at the improvement of farmland bird habitats.

Our approach is thereby guided by the ultimate requirement that none of the scenario outcomes should decrease the habitat quality of any of the considered bird species.

In Flanders, special species protection programmes (“Soortenbeschermingsprogramma’s”)

have been set up with the aim to achieve population recovery. Each species protection programme includes a number of protection measures which apply for a minimum of five years.

Apart from the species protection programmes, a number of instruments exist to help realise the species targets, incl. agricultural management agreements, land and nature design projects, subsidies for non-productive investments, subsidies for the protection of nests of grassland birds, project subsidies focussed on nature in general, and project subsidies focussed on specific species.

We used the available programmes as a guideline to define our two scenarios:

The **species protection programme scenario** (SPP) reflects the attempt to improve the conditions of a specific species in specific areas (Fig. 3).

This scenario exemplifies the case in which there is dedicated budget for the protection of specific species and the task is to **select the appropriate measure as well as to determine where these measures should be applied.**

In other instances, there is only a limited budget and the task then is to **allocate this budget in such a way as to get the best possible outcome.**

This is reflected in our second scenario, the **budget-constraint scenario.**

In contrast to the species protection programme scenario, it covers all agricultural areas of Flanders.

FARMLAND BIRD HABITATS IN... FLANDERS

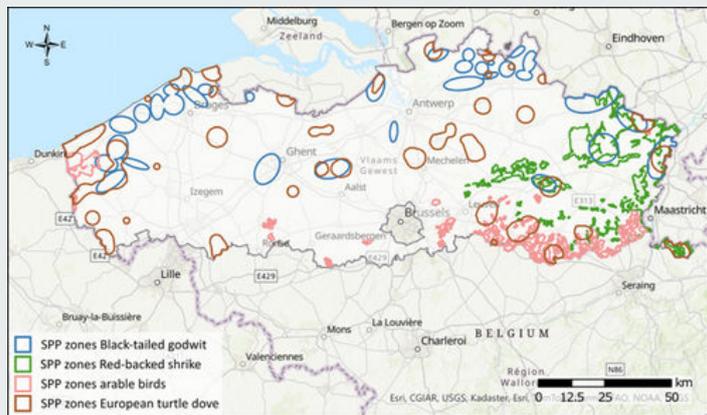


Figure 3: Illustration of the location and overlap of the focus areas of the four species protection programmes we considered in our Species Protection Programme (SPP) Scenario

Fig. 4 shows the resulting percent change in habitat suitability for per species and scenario.



Figure 4: Change in habitat suitability for each species considered in the two scenarios calculated for Flanders; the current and optimised average habitat suitability are based on the different areas for which the respective values were calculated

FARMLAND BIRD HABITATS IN... FLANDERS



Fig. 5 shows the resulting change in habitat suitability for the Black-tailed godwit per scenario. Immediately noticeable is that the SPP-scenario leads to more positive

changes in the habitat suitability while the budget scenario involves more areas in which habitat suitability could be improved.

Such scenarios help to **identify the right type of measures** to improve farmland habitats along with the **location** at which they should be implemented.

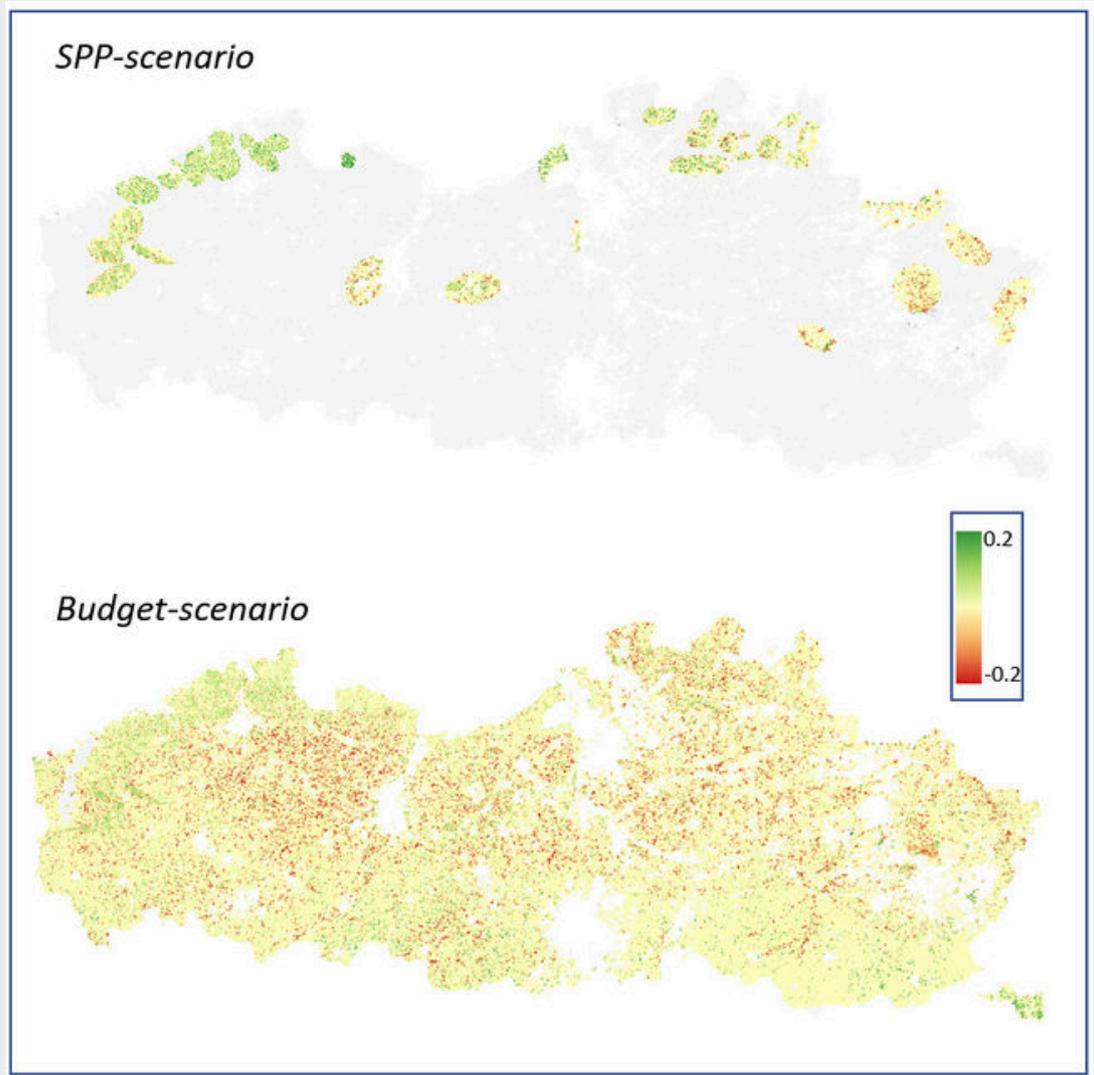


Figure 5: Change in habitat suitability for the **Black-tailed godwit** for the two scenarios considered for Flanders; the grey shaded area in the upper map shows the farmland parcels covering Flanders.

DEMONSTRATING!... IN FLANDERS



In November, our project partners from VITO invited test users for several online and offline sessions. Participants came from the farming community but also from different institutions, including from non-profit and policy-focused organisations (Fig. 6).

Among the participating organisations were [VZW VELDWERK](#), a non-profit, whose mission it is to improve the situation for farmland birds.

[Boerennatuur Vlaanderen](#) is a network organization of groups of farmers working with agro-environmental measures within an economic farm business, advising on biodiversity, landscape, soil and water management, facilitating collaboration and networking and giving policy advice.



Figure 6: Providing tough but useful feedback: participants at the showcasing of BirdWatch's results for Flanders; Image Source: VITO

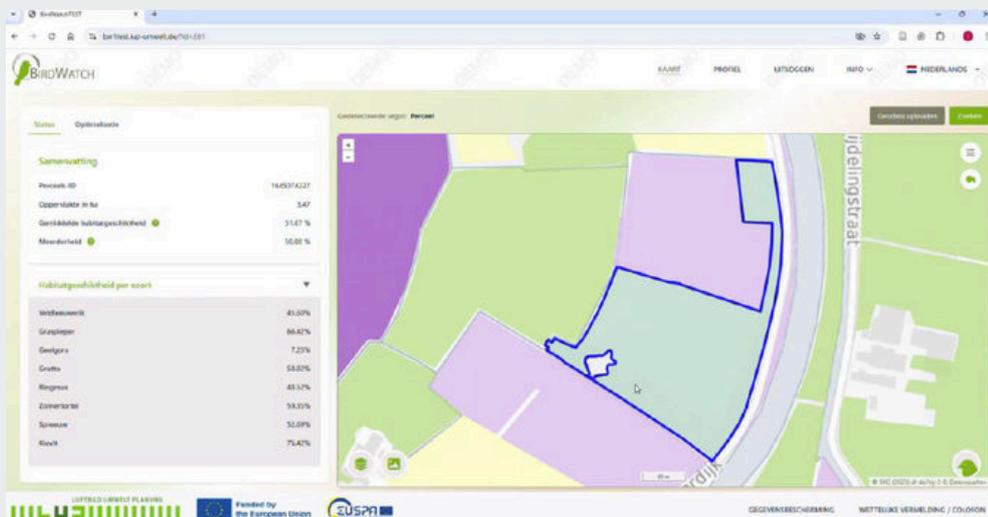


Figure 7: The BirdWatch platform as it was presented during VITO's off- and online workshops; Image Source: VITO



DEMONSTRATING!... IN FLANDERS

The [Instituut Natuur- en Bosonderzoek \(INBO\)](#) is an independent research institute of the Flemish government which supports and evaluates biodiversity policies and biodiversity management.

Apart from bird protection, nature conservation and farmers representatives, members of different regional landscape organisations and not least the Flemish Agency for Agriculture and Fisheries ([Agent-schap Landbouw en Zee-visserij](#)) as well as the Flemish paying agency ([Vlaamse Landmaatschappij](#)) allowed for the exploration of BirdWatch's potential as a policy-informing tool.

After the presentation of the platform and its functionalities, VITO collected immediate feedback and suggestions which will subsequently inform BirdWatch's IT development team.

Among the suggestions was that regional habitat models, with parameters selected specifically for the farmland areas in Flanders, could provide added value.

Indeed, regionalised habitat suitability models are important ways forward for BirdWatch's applicability in policy-making.

In addition, once we can provide habitat suitability values for more than one year, regional and local trends can be explored.

In conjunction with expert knowledge, both from the fields of ecology and agri-environmental policy, BirdWatch has the potential to inform policy implementation, evaluation and design.

In fact, a common basis to discuss and evaluate possibilities which includes the various view points involved in farming, ecology and policy is what is needed to improve the situation of farmland birds, in Flanders and beyond!

NPA AT THE IACS COMMUNITY EXCHANGE ANNUAL CONFERENCE



On 9-11 September, 2025, the **IACS Community Exchange (ICE)** annual conference, organised by the Joint Research Centre (JRC) in collaboration with the EC DG AGRI and the French Paying Agency (ASP) took place in Reims, France.

The event brought together representatives of the European Commission (EC), national authorities, research institutes, and industry to discuss the future of agricultural monitoring and data-driven policy in the EU.

Tomas Orlickas, the Deputy Director of the NPA, familiarised the conference participants with the status of the Area Monitoring system (AMS) in Lithuania and the respective Horizon 2020, Horizon Europe and LIFE projects.

Mr. Orlickas highlighted NPA's contribution to biodiversity monitoring and agri-environmental planning through the Horizon Europe project Birdwatch, explaining how it is building an integrated platform for satellite-based habitat assessment to provide biodiversity indicators. NPA clearly stated that by aligning AMS with biodiversity modelling,

Lithuania is moving beyond compliance monitoring towards nature-positive agricultural governance which will help both farmers and policy-makers to make evidence-based decisions on eco-schemes, habitat management, and biodiversity protection, ensuring that agricultural policy delivers productivity AND ecological value.



Figure 8: Mr. Orlickas (NPA) presents BirdWatch at the IACS community exchange; conference in Reims, France; Image Source: NPA



Don't hesitate to get in touch with us!

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